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ABSTRACT

This document presents a review of the research on the affective domain as it relates to learning and teaching in the classroom. The synthesis concludes that it is clearly evident that affective factors are an important dimension of the teaching/learning process and that the ways in which teachers respond to students and classroom situations relate to cognitive outcomes such as achievement and behavior. Causal relationships have not yet been conclusively determined, but such affective factors as motivation, self-esteem, self-perceptions, feelings of confidence, self-concept of ability, and teacher praise appear to have positive affects on achievement and behavior. The bulk of the document consists of three appendixes. Appendix A details the instrumentation used in measuring the affective domain. Appendix B provides a representative sampling of research results from studies of the affective domain presented in 36 categories. Appendix C provides a description of a successful teacher training program called TESA (Teacher Expectations and Student Achievement) designed to produce teacher behaviors that result in improvements both in student achievement and student attitudes. A list of 136 references is also included. (CB)

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TEACHING AND LEARNING IN THE AFFECTIVE DOMAIN:

A REVIEW OF THE LITERATURE

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TEACHING AND LEARNING IN THE AFFECTIVE DOMAIN: A REVIEW OF LITERATURE

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FOREWARD

This document contains a review of research studies in the affective domain. The report was prepared by Walter C. Hunt, Instructional Program Specialist, under the supervision of Theodore E. Andrews, Director, Professional Education Section, Office of the Superintendent of Public Instruction.

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INTRODUCTION

In recent years, educators have focused considerable attention on research in the cognitive domain to support the development of a number of observation systems (e.g., the Florida Performance Measurement System). These systems, now operational, are adding daily to what is known about teaching and learning in the cognitive domain. The affective domain, however, has been largely ignored in these efforts because the research base linking affective characteristics to student achievement is weak and contradictory.

The State of Washington has authorized the development of a research-based observation instrument to be used with student teachers. A review of research, 1982-1986, in the cognitive domain--which complements previous efforts--has been completed as a first step to assist teacher educators in this task.

This second report, a review of the research on the affective domain as it relates to learning and teaching in the classroom has been completed to complement the studies in the cognitive domain.

The major findings are included in the "Summary" and "Conclusions" sections. Descriptions of the research studies are included in the "Appendices."

DEFINING THE AFFECTIVE DOMAIN

"...few, if any, human reactions fall completely into one of these categories (cognitive, affective, psychomotor). It is important that the affective domain be understood as a construct, not a real thing, and that labeling of certain reactions as affective...is to point out aspects of these reactions which have significant emotional or feeling components." (Anderson, 1981)

One of the first modern attempts to provide a definition for the affective domain was undertaken by Krathwohl et al (1964) in Taxonomy of Educational Objectives: The Classification of Educational Goals, Handbook 2: Affective Domain. Krathwohl offered a classification system for affective classroom behaviors. He felt that affective behaviors could be ordered along a continuum of internalization representing "a continuous modification of behavior from the individual's being aware of a phenomenon to a pervasive outlook on life that influences all his actions."

Krathwohl's taxonomy is based on a concern with the "degree of internalization" (i.e., degree to which an attitude, value or interest has been incorporated into the personality) and includes such categories as receiving, responding, valuing, organization, and characterization by a value or value complex. In Krathwohl's continuum, one goes from "merely being aware" that a phenomenon exists, to its becoming one's basic outlook on life.

Other attempts to define and describe the affective domain include the following:

1. According to Bloom (1956), the affective domain includes objectives which describe changes in interest, attitudes and values, and the development of appreciations and adequate adjustment.
2. Sinclair (1985) writing in The International Encyclopedia of Education refers to "affect" as a term used to describe the feeling or emotional aspect of experience, and is concerned with:
   - The motivation of behavior.
   - The maintenance and enhancement of self-esteem in the educational setting.
   - Anxiety and achievement motivation.
   - Development of curiosity, exploratory behavior, and a need-to-know and understand.
   - Social motives, such as a need for praise, recognition and attention.
3. According to Anderson (1981) there are seven central student affective characteristics:
   (1) values;
   (2) academic self-esteem;
   (3) anxiety;
   (4) interests;
   (5) locus of control;
   (6) attitudes; and
   (7) preferences.

The essential features of these affective characteristics are as follows:

(a) They must involve feelings and emotions.

(b) They must be typical of the thoughts or behaviors of the person.

(c) They have intensity (strength of feelings).

(d) They have direction (refers to positive or negative orientation of feelings).

(e) They have a target (object, activity, or idea toward which feeling is directed).

4. According to Beane (1985/1986) "...the form or substance of affective education represents perhaps the most problematic of all school issues." In an attempt to define "affective education," Beane refers to a distinction made by former U.S. Commissioner of Education, Sterling McMurrin who distinguished between affective and cognitive learning by suggesting that the former had to do with emotion and feelings, and that the latter focused on knowledge and thought. It appears that such terms as "cognitive," "academic," and "thinking skills" are often used in contradistinction to "affective," as though the term affective is separate and distinct from the thinking process.

As we have seen, there have been several major attempts to give definition to the affective domain. However, the purpose of this paper is not to select or explain one particular definition over another, but to present a brief outline of several of the most popularly accepted definitions and descriptions of the affective domain in educational literature. Perhaps, as stated earlier, it is best to consider the affective domain in very broad terms that deal with the emotions and

feelings of students, how these feelings and emotions affect student achievement and student behavior, and what the teacher can do to bring about the most desirable feelings and emotions that positively affect student behavior and achievement.

Recognizing that there are a variety of definitions of the affective domain will allow for the inclusion of a number of significant research results which might not otherwise be possible were a single narrow definition used to describe the affective domain.

The next section of this paper will present the research results obtained from studies conducted in the affective domain.

SUMMARY OF RESEARCH RESULTS

A synthesis of the major affective research findings contained in the appendix are presented below. An analysis of the overall significance of these findings, and their implications for the teaching/learning process, is presented in the "Conclusions" section of this paper.

Synthesis of the Major Findings Contained in this Paper

1. One of the primary motives of the student in the classroom is to avoid failure (Sinclair, 1985). Anxiety is a debilitating factor that affects the performance of the two main types of students in classrooms:
   (a) high-anxious students who prefer a highly organized, structured, and teacher-directed style of instruction with clear expectations, and
   (b) low-anxious students who prefer a student-centered learning style that requires the use of initiative and independence, with discussions and student discovery.

   Because most regular classrooms will contain a mix of low-anxious and high-anxious students, in order to prevent anxiety from interfering with their academic performance, there is a need for teachers to be trained in and develop skills that utilize the appropriate teaching styles.
2. There is little evidence that teachers who stress affective outcomes are any more "affective" (such as "accepting," "encouraging," "democratic," "warm," or "praising," etc.) in their classroom behavior than teachers who either stress cognitive outcomes or weight

cognitive and affective outcomes equally (Prawat and Nickerson, 1985). Also, valuing affect for its own sake may be counter-productive in terms of both the affective and academic growth of students (Prawat and Nickerson, 1988).

3. The effects of affective educational programs designed to improve student self-esteem have been modest at best (Calsyn, 1984).
4. Of all the research factors that account for the bulk of school learning that takes place, several have been identified as being "affective" in nature: motivation; quality of instructional experience (including psychological climate); the home; the classroom social group; and the peer group outside of school (Walberg, 1984).
5. An extensive study conducted by Laminack (1985) involving teacher undergraduates, indicated that the undergraduates' recollections of their favorite elementary school teacher were characterized by a variety of affective characteristics.
6. Students hold certain attitudes about themselves and their abilities, which ultimately have a strong impact on their academic performance in school. However, it also appears that past performance has a heavy influence on the attitudes students develop about themselves and their abilities. Although the research findings appear to conflict somewhat, the weight of the evidence suggests that self-concept appears to influence academic achievement (Byrne, 1984).
7. Although they do appear to be related, there is no conclusive evidence of a causal connection between self-concept and academic achievement (Sheirer and Kraut, 1979).

8. A continuing problem in self-concept research includes, (1) imprecise and varying definitions, and (2) inappropriate instrumentation (Beane, 1980).

9. A student's sense of self is tied to academic performance and the quality of relationships he/she has with fellow students and teachers (McGuire, et al, 1979). There is a progressive relationship between the amount of time a student is in school over the years and the extent to which his/her self-concept is related to the school situation.

   By the 11th grade, as a student progresses through school, the self-concept becomes more and more tied to academic achievement and the quality of the relationship he/she has with fellow students and teachers.

10. A review of doctoral dissertations, dealing with self-concept research, indicated that (1) in no case were changes in achievement clearly associated with changes in self-concept, and (2) most intervention produced some effects on either self-concept or academic achievement, but not on both (Scheiver, 1979).

11. "Sympathy" and "anger" reactions by the teacher, in response to a student's academic performance, are perceived by the student in a manner that is the reverse of what the teacher intends. Students perceive a "sympathetic" response by a teacher as being negative, because the response implies the student doesn't have the ability to perform any better, but made a good effort; and an "anger" response by the teacher is perceived by the student as having a positive connotation because it implies that the student has the ability, and if he/she had tried harder they would have improved their performance (Graham, 1984).

12. Helping students, and offering praise for their work, may have negative consequences for the teacher in that both actions by the teacher can convey to the students (and their peers) that the praised or helped students are perceived as being low in ability (Graham, 1984).

13. Instructional strategies that entail help-giving, such as special class placement and remedial tutoring, may produce negative results in that "...evidence mounts that these practices lead to neither improved student performance, nor enhanced self perception of ability" (Graham, 1984).

14. Research on "cooperative learning" indicates that it is a powerful tool in fostering student interpersonal and academic growth in the classroom--much more so than either "competitive" or "individualistic" learning experiences. Cooperative learning experiences have the following impact on students and the classroom situation: (1) increased achievement; (2) more positive attitudes; (3) a climate of acceptance of differences; and (4) a positive effect on many other learning outcomes (Johnson and Johnson, 1985).

15. Instructional techniques that have proven effective in improving or addressing the affective needs of students include (1) role-playing, (2) discussion, and (3) cooperative problem solving (Allender, 1982).

16. It is difficult to document that changes in self-concept affect achievement, but studies have been conducted showing that achievement is affected by affective variables (Allender, 1982). For example, relationships were found to exist between interest, curiosity and improvement in reading (Condon, 1978).

17. Some educators have made a case for affective outcomes as dependent variables in and of themselves. Teacher education programs, it is felt, focus too much on the development of the teacher's knowledge and skills, and not enough on training teachers to become aware of the emotional reactions of students (e.g., empathy to respond to emotions, and ability to recognize teaching strategies which consider the emotional needs of students) (Anderson and Ching, 1985).

18. Research on attribution theory has substantiated the following (Oren, 1983):

    (a) Internal attributions of ability and effort are associated with high achievement.

    (b) External attributions dealing with luck and task difficulty are associated with low achievement and learned helplessness.

    (c) Persons believing their successes and failures are contingent on their own behavior will be more likely to persist in seeking further achievement goals.

    (d) Persons who do not believe that their behavior can produce successful outcomes, and do not assume responsibility for the outcomes, will not exert effort to achieve success.

19. The level of teachers' interpersonal functioning is directly related to pupil achievement, attendance, self-concept, attitude toward school, and behavior in school (Aspy and Roebuck, 1972).

20. Motivation measures are relatively weak correlates of learning (Uguroglu, 1979 and Bloom, 1976).

21. Research shows a definite relationship exists between student school-related attitudes and academic achievement (Kahn, 9173).

22. Aptitude (or ability) measures account for more than half of the reliable variance in school achievement (Kahn, 1973).

23. The levels of teachers' interpersonal functioning are related directly to pupil achievement, attendance, self-concept, attitudes toward school, and behavior in school (Aspy, 1982).

24. The emotional tone of the typical public school classroom is neither harsh and punitive nor warm and joyful--it is described as being flat (Goodlad, 1984).

25. Student self-concept scores decrease at a steadily declining rate from early elementary grades up through high school (Goodlad, 1984).

26. Praise has significance only in terms of the context in which it is used (the context determines the meaning of the praise or criticism). Abundant and/or indiscriminate praise is meaningless, but a well-chosen criticism can convey as much positive information as praise. When the amount of praise is considered by the students to be a good indicator of the teacher's expectations, then the amount of praise that one gets is related to one's self-concept of ability (Parsons et al. 1982).

27. Teacher enthusiasm and the teacher's appropriate use of praise have proven to be effective in increasing academic achievement (Silvernail, 1985).

28. Self-concept has a consistent positive relationship with general academic achievement, and a significant positive relationship with mathematics achievement (Reyes, 1984).

29. Confidence in learning is one of the most important affective variables in academic achievement. Relatively strong correlations have been found between confidence in learning math (an affective variable) and math achievement (Reyes, 1984).

30. As early as in kindergarten and in grade one, students at both ends of the achievement scale have already begun to incorporate classroom performance feedback into their self-perceptions (Stipek, 1981).

31. Early elementary students may misinterpret information about poor work habits as a negative reflection of their ability. Effort and ability are not clearly differentiated from each other until after eleven years of age (Nicholls, 1978).

32. Students' perceptions of their teachers' feelings toward them are highly correlated with their self-perceptions (Silvernail, 1985).

CONCLUSIONS

There are several conclusions that can be drawn from the synthesis of major research findings presented in the previous chapter.

It is clearly evident that affective factors are an important dimension of the teaching/learning process. How teachers react and respond to students and classroom situations impact students in critical ways--ways which could relate to cognitive outcomes such as achievement and behavior.

Although causal relationships have not been conclusively determined, between such affective factors as motivation, self-esteem, self-perceptions, feelings of confidence, self-concept of ability, teacher praise, and the desired outcomes of achievement and improved behavior, correlational research has demonstrated that a definite relationship does exist between these variables.

While the links between research and the affective domain and student achievement are weaker than those found in the cognitive domain, research on the affective domain does support a number of conclusions that should impact decisions made by teachers and teacher educators at both the preservice and inservice levels:

1. Cooperative learning approaches create positive affect in students and improve student achievement.
2. Anxiety interferes with learning. The same teaching techniques that produce high anxiety in some students produce low anxiety in other students, and vice versa. Teachers need to be sensitive to the fact that some students desire highly structured classroom environments while other students, often in the same class, prefer more informal student-centered approaches.

3. Teachers use of sympathy, anger, and praise are often counter-productive. Teachers need to realize the unintended impact of these actions.
4. A student's self-concept is related to that student's achievement level but which is the cause and which is the effect is not clear.
5. Teachers who have a sense of control over their personal and professional environments are more effective.
6. Teachers' interpersonal interactions with students have a direct impact on student achievement, attendance, and behavior.
7. Young elementary children may consider comments about their work habits as criticisms of their ability.
8. Students' self-concept scores decrease at a steadily declining rate from early elementary grades through high school.
9. Teacher enthusiasm is positively related to student achievement (a finding also supported by researchers focusing primarily on the cognitive domain).

Even if no direct cause and effect relationship is ever established between such student affective qualities as high self-esteem, a good self-concept, positive attitudes, motivation, interest, confidence, and outcomes such as increased student achievement and improved behavior, these affective student qualities would still be desirable outcomes in and of themselves. Washington's state goals, Exhibit 1, for example, clearly combine cognitive and affective outcomes.

Affective, cognitive and psychomotor goals are all essential elements in a state's education system. While researchers may by necessity need to examine each of these domains separately, state policy-makers, administrators, teachers, and teacher educators need to draw upon the relationships between and among each of these domains.

Exhibit 1

"Goals to Guide Expected Student Outcomes"

As a result of the process of education, students should:

- Possess and apply the basic skills of language arts
- Possess and apply the basic skills of mathematics
- Possess self-understanding and self-awareness
- Possess and apply knowledge and skills necessary to maintain physical and mental health and well-being
- Understand and apply thinking and problem-solving skills
- Possess and apply the knowledge, understanding, and skills needed for full and effective participation in a democratic society
- Possess and apply the knowledge, understanding, and skills needed for effective participation in a pluralistic, interdependent, global society
- Understand and apply concepts and skills in the natural and physical sciences
- Possess and apply knowledge, skills, and appreciation of the arts and humanities
- Possess the ability to enter the job market effectively
- Understand, value, and apply technological principles and processes
- Understand and apply skills needed to initiate and adapt to change in self, society, and environment

APPENDICES

APPENDIX A: Instrumentation Used in Measuring the Affective Domain

APPENDIX B: Research Results Obtained From Studies Conducted in the Affective Domain

APPENDIX C: TESA: An Affective Teacher Inservice Program Based on Research

Appendix A

Instrumentation Used In Measuring the Affective Domain

There are a variety of instruments designed to measure the various dimensions of the affective domain. One of the most widely used questionnaires for attribution measure is called the Intellectual Achievement Responsibility (IAR) instrument. The primary use of this instrument is to gather data in the classroom situation, in an effort to determine the extent to which students ascribe causes of success or failure, in academic tasks, to either internal or external causes.

The variety of instruments used to gather data supporting attribution theory differ widely. Some of the differences are in the number of positive and negative statements contained in the instrument (usually there is an attempt to balance equally, the number of positive and negative response statements), and the kinds of situations or domains described (e.g., school situations, or others). The instruments also differ in format (e.g., agree-disagree, choice of attribution, or open-ended) and in content of locus of control.

Some samples of the kinds of items that might be found in attribution instruments are as follows:

1. Children's Locus of Control (Bialer, 1961)

   Sample Item: "When someone gets mad at you, do you usually feel that there is nothing you can do about it?"

2. Intellectual Achievement Responsibility (IAR) questionnaire (Crandall, Kratkovsky and Crandall, 1965)

   Sample Item:

   "When you have trouble understanding something in school, is it usually . . ."

   (a) because the teacher did not explain it clearly, or

   (b) because you did not listen carefully?

3. Stephens-Delys Reinforcement Contingency Interview (Stephens and Delys, 1973)

   Sample Item: (Open-ended question) "What makes mother smile?"

The data obtained from the use of these kinds of instruments, are analyzed using different kinds of statistical techniques. However, the most frequent method of reporting results is correlation co-efficients showing relationships between the questionnaire scores and scores on standardized achievement measures. Because the results are reported in correlational form, no cause and effect relationships can be made. Other kinds of more sophisticated statistical analysis (e.g., ANOVA, MANOVA, Regression Analysis, and t-tests for significance) are also used to analyze the results and make comparisons between student attributes and achievement measures. On the basis of scores obtained on the attribution questionnaires, it is possible to identify students that can be classified as either "internals" (performance is dependent upon ability or effort) or "externals" (performance is dependent upon luck or task difficulty).

According to Marsh et al. (1984) the Intellectual Achievement Responsibility (IAR) Scale developed by Crandall et al. (1965) is one of the most widely used instruments in attribution research. Because there are no other widely used instruments that are satisfactory as measures of individual differences in self-attributions, the IAR Scale is the only

standardized instrument that has been widely employed to measure separate attributional dimensions. Although the IAR scale has served as the basis for several hundred studies (Cooper, Burger and Good, 1981) this instrument, according to Marsh et al. (1984), judged by current standards, is a poor instrument for attribution research and the extent of reliance upon it underscores the deficiency of measurement sophistication in this field. According to Marsh et al. (1984) there are no widely used instruments that are satisfactory as measures of individual differences in self-attributions, and those attribution-measuring instruments that have been employed are often ad hoc measurement devices with untested psychometric properties.

Other problems in the measurement of self-attributions, according to Marsh et al. (1984), include construct validity and the exclusion of other potentially influential factors affecting attribution. The influence of dispositional as well as situational factors, and lack of comparability of measurement procedures used by different researchers, are also a problem. In addition, according to Stipek and Weisz (1981), another major problem with instruments designed to gather data to support attribution theory is that many of the questionnaires have low reliability co-efficients (see Table 1, below. This results in undermining the credibility of the observed relationships between attribution measures and achievement measures (such as teachers' grades or standardized achievement test scores). There are a number of studies which have been conducted verifying a relationship between measures of attribution and achievement measures. A listing of these studies and the results obtained are presented in Table 2.

TABLE 1
(Taken from: Stipk & Weiss, 1981)
Questionnaire Measures of Children's Locus of Control

Measure	Age-Appropriate	Reliability		Format	Domain	Outcome			References
		Internal Consistency	Test-Retest			Pos.	Neg.	Neu.	
Academic Achievement Accountability (AAA)	Middle-elementary grades	.66	.67	Agree-disagree	School	6	6	3	Clifford & Cleary (1972)
Children's Locus of Control Scale (Bialer-Cromwell)	Grades 1-6	-.01 - .87	.22 - .84	Agree-disagree	General	15	4	4	Bialer (1961) Gorsuch, Hamighan, & Barnard (1972)
Children's Nowicki-Strickland Internal-External Control Scale (CNSIE)	Ages 9-18	.24 - .63	.63 - .71	Agree-disagree	General	17	12	11	Nowicki & Strickland (1973)
Children's Picture Test of Internal-External Control (Battle)	Elementary-school aged			Open-ended	General	1	5	0	Battle & Rotter (1963)
Fate Control	Adolescents & Adults			Agree-disagree	General	3	0	0	Coleman et al. (1966)
Gruen, Korte, Stephens Internal-External Scale (GKSIE)	Grades 2-6	.69 - .79	.83	Choice of attribution	School	19	19	0	Gruen, Korte, & Baum (1974)
Intellectual Achievement Responsibility Questionnaire (IAR)	Gades 3-12	.54 - .60	.47 - .74	Choice of attribution	School	17	17	0	Crandall, Katkovsky, & Crandall (1965)
Internal-External Locus of Control Scale (Rotter)	Adolescents & Adults	.65 - .79	.49 - .83	Agree-disagee	General	8	7	8	Rotter (1966)
Locus of Control Picture Test for Children (ETS)	Lower-elementary	.56 - .61	.43	Choice of attribution	School	10	10	0	Stipek (1980)
Preschool & Primary Nowicki-Strickland Internal-External Control Scale (PPNSIE)	4-8 years		.79	Agree-disagree	General	14	3	1	Nowicki & Duke (1974)
Stanford-Preschool Internal-External Scale (SPIES)	3-6 years	.14 - .20	.21 - .72	Choice of attribution	General	6	8	0	Mischell, Zeiss, & Zeiss (1984)
Stephens-Delys Reinforcement Contingency Interview (SDRCI)	Preschool	.82	.62 - .69	Open-ended	General	20	20		Stephens & Delys (1973)
Tel Aviv Locus of Control Scale (Tel Aviv)	Grades 4-8	Past Scale: .31 - .61	Future Scale: .74 - .84	Choice of attribution	General	12	12		Milgram & Milgram (1975)

TABLE 2
(Taken from Stipek & Weisz, 1981)
Summary of Studies on the Relationship Between Locus of Control and School Achievement

Study	Sample	Achievement Test	Locus Measure	Results				
				Surburban		Inner-City		
ır & Wohl 972)	N = 375 Grade: 11 & 12 Suburban & Inner-city	GPA	Router's I-E Scale	r = .09		r = .26		
				Boys		Girls		
ıett & Kaiser 978)	N = 138 Grades: 4, 6, & 8 Middle class	IQ		p .05		n.s.		
		Achievement Tests (Metropolitan & SRA)		p .05		n.s.		
		GPA		p .05		n.s.		
			Grade	1	2	3	4	
.el (1971)	N = 431 Grades: 1, 2, 4 & 6 Lower and middle class	Metropolitan Reading Readiness (from grade 1)	Bailer-Cromwell	Lower-SES Middle-SES	r = .13 r = .31	r = .13 r = .30	r = .23 r = .51**	r = .14 r = .39*
		Iowa Test or Metropolitan Achievement Test (from grades 2 & 4)		Lower-SES Middle-SES	n.d. n.d.	r = -.04 r = .36*	r = .36** r = .49**	r = .32* r = .48*
.inelli & .zmann (1973)	N = 23 Age: 7-10 Rural	GPA	GKSIE		p .05			
				Boys		Girls		
: & Austrin 971)	N = 50 Ages: 14-16 SES: Low	Iowa Test of Basic Skills (matched group, adequate & underachievers)	IAR I I I	p .01 n.s. p .01		p .01 p .01 p .01		
tord & Cleary 72)	N = 99 Grades: 4, 5 & 6	Achievement: Spelling Vocabulary Math	AAA	r = .47*** r = .44** r = .24		r = .03 r = .30* r = .16		
man et al. 66)	N = 356, 860 Grades: 6, 9 & 12 National sample	ETS: Sequential Tests of Educational Progress Series (& others)	Fate Control	Regression analyses showed Fate Control score to predict achievement better than most family & school variables.				
				Boys		Girls		
oal, Katovsk,, reston (1962)	N = 40 Grades 1, 2, & 3 All SES	California Achievement Test: Reading Arithmetic	IAR I	r = .51* r = .38*		r = .03 r = .13		
arms & penter (1968)	N = 214 Grades 2, 6, 7 Black, disadvantaged	Spelling test Math test	Bialer-Cromwell	n.s. n.s.		p .05 p .05		
h, Pezzuti, & son (1975)	N = 48 Mean age: 11 years Emotionally disturbed	Standard achievement test (unspecified)	CNS-IE		r = .45**			

TABLE 2 (continued)

Study	Sample	Achievement Test	Locus Measure	Results			
				Boys		Girls	
Gordon (1977)	N = 113 Grade 4 Lower-middle to upper-middle	Iowa Test of Basic Skills	CNS-IE	n.s.		r = .27*	
		GPA		r = .25*		n.s.	
Gruen, Korte & Baum (1976)	N = 50 Grade 2 White	GPA	GKSIE	r = .34*			
				Southern		Northern	
				Boys	Girls	Boys	Girls
Jorgensen (1976)	N = 725 Grade: high school Black	Vocabulary	Social	r = .22	.27***	.22	.28***
		Achievement Test	Reaction	r = .16*	.17*	.20*	.26**
		GPA	Inventory	r = .17*	.15*	.15	.27***
Karnos (1978)	N = 42 Grade 6	Stanford Reading Test	Bialer-Cromwell	p .05			
Kennelly & Kinley (1975)	N = 49 Grade 6 Boys	Iowa Test of Basic Skills:	IAR				
		Vocabulary		r = .48**			
		Reading Comprehension		r = .47**			
		Language Skills		r = .40**			
		Work Study Skills		r = .41**			
		Arithmetic Skills		r = .33*			
		GPA		r = .40**			
Kifer (1975)	N = 214 Grades 2, 4, 6 & 8 Top & bottom 20% of class in GPA	GPA	IAR	p .001			
				Grade 5		Grade 7	
	N = 206 Grades 5 & 7	GPA	IAR	r = .26* (N = 91)		r = .31** (N = 115)	
				Grade 8		Grade 11	
Lessing (1969)	N = 558 Grades 8 & 11 Black & White	GPA	Personal Control Scale (7 times patterned after Rotter's I-E scale)	p .01		p .01	
				Boys		Girls	
McGhee & Crandall (1968)-Study 1	N = 923 Grades 3, 4, 5, 6 8, 10 & 12	Iowa	IAR I	n.s.		p .01	
		Achievement	I	p .10		p .001	
		Test (grades 3-5)	I	p .10		p .001	
	White	California	IAR I	n.s.		n.s.	
		Achievement	I	n.s.		n.s.	
		Test (grades 6, 8, 12)	I	n.s.		n.s.	
		GPA (grades 3, 5 6, 8, 10 & 12)	IAR I	p .01		p .01	
			I	p .01		p .01	
			I	p .01		p .01	
Study 2	N = 134 Grades 3, 7, 10 White	GPA	IAR I	n.s.		n.s.	
			I	p .01		n.s.	
			I	p .05			
Messer (1972)	N = 78 Grade 4	GPA	IAR I	p .001		n.s.	
			I	n.s.		p .05	
			I	p .001		p .05	
		Stanford	IAR I	p .10		n.s.	
		Achievement	I	n.s.		p .10	
		Test	I	n.s.		n.s.	

TABLE 2 (continued)

Study	Sample	Achievement Test	Locus Measure	Results		
Milgram & Milgram (1975)	N = 298 Grades 4-8	Levy & Chan Achievement Test (grades 4, 5 & 6)	Tel Aviv: Past Scale Positive Negative Future Scale Positive Negative	r = .27** r = .20* r = .22* n.s. n.s. n.s.		n.s. n.s. n.s. r = .28* r = .23* r = .20*
Naditch & DeMaio (1975)	N = 136 Grade 9	GPA (grades 7 & 8) Achievement Test (not specified)	Rotter		r = -.12 r = -.15	
				Boys	Grade	Girls
Nowicki & Strickland (1973)	N = 1017 Grades 3-7, 10, 12 White	Achievement Test (not specified)	CNS-IE	r = .28 r = .12 r = .40* r = .27 r = .34* r = .44* r = .45	3 4 5 6 7 10 12	r = .18 r = .20 r = .25 r = .11 r = .31 r = .03 r = .00
Nowicki & Duke (1974)	N = 240 Ages 5-8 White	Iowa Test of Basic Skills: Verbal Math	PPNS-IE	r = .17 r = .20		r = .34* r = .45*
				Boys		Girls
Nowicki & Segal (1974)	N = 112 Grade 12 Lower-middle class White	GPA Iowa Test of Basic Skills Composition Reading Math	CNS-IE	r = .28*		r = 29*
				r = .35** r = .32* r = .32*		r = .01 r = .12 r = .10
				Social Desirability		
Nowicki & Walker (1973)	N = 78 Grade 3	Stanford Achievement Test (Crandall's Social Desirability Scale)	CNS-IE	n.s. n.s.	Low High	p .01 n.s.
Nowicki & Walker (1974)	N = 63 Grades 5 & 6 Black & White	Metropolitan Achievement Test	CNS-IE		p .05	
Ollendick & Ollendick (1976)	N = 45 Boys Juvenile delinquents Lower-middle to low SES	Peabody Individual Achivement Test	CNS-IE	r = .37** - .50** (on subtests)		
Powell (1971)	N = 51	GPA	IAR I I I Bailer-Cromwell		r = .10 r = .24 r = .19 r = .43*	
					Boys	Girls
Prawat, Grisson & Parish (1979)	N = 499 Grades 3-11	GPA	NCS-IE	Grades 3-5 Grades 6-8 Grades 9-12	R = .11* R = .10* n.s.	n.s. R = .22** R = .13**
Reimanis (1973)	N = 201 Grades 3-6	Teacher Rating of Achievement	Bailer-Cromwell Battle IAR I I I	grade 5 p .05 (all other grades n.s. 3 & 6 4 — 3 White		— 3 & 5 5 4 Black

TABLE 2 (continued)

Study	Sample	Achievement Test	Locus Measure	Results			
St. John (1971)	N = 957 Grade 6 Black & White	Metropolitan Achievement Test-Reading	3 Agree/disagree statements (2 from Coleman 1966)	r = .30**		r = .19**	
		GPA		r = .29**		r = .20**	
				Success		Failure	
				Ability	Effort	Ability	Effort
Schultz & Pomerantz (1976)	N = 93 Grade 9	Comprehension Test of Basic Skills	IAR (divided into subscales on basis of particular attribution)	r = .35**	r = .35**	r = .10	r = .10
		GPA		r = .47**	r = .44**	r = .1[illegible]	r = .14
				(Partial correlations with achievement motivation & remaining internal causal ascriptions controlled.)			
Shaw & Uhl (1971)	N = 211 Grade 2 Lower & middle class Black & White	Reading achievement (Stanford Achievement Test)	Bialer-Cromwell	r = .32** for upper-middle class white group, no significant correlations for other groups.			
Shore, Miligram & Malasky (1971)	N = 196 Grades 1 & 6	Metropolitan Reading Readiness Test (grade 1) Iowa Test of Basic Skills (grade 6)	Locus of Control Interview (16 open-ended questions)	r = .15* (partialling out grade & SES)			

Note: All correlations and significant differences represent a positive relationship between internality and achievement. (Negative correlations were changed to positive if the locus of control or achievement measure was scaled so that high scores represented externality or low achievement.
If p-value is given, Analysis of Variance or a t test was the statistical test employed; r is given for correlational analyses.
*p .05
**p .01
***p .001

The statistics used to analyze data in attribution research, for the most part, have been correlational, however, a review of the studies presented in Table 2 indicates that t-tests and analysis of variance have also been used to analyze data. Definite correlations exist between school achievement and locus of control. The results also indicate that success often is ascribed to ability or effort, while failure is often ascribed to external factors such as luck, task difficulty, or significant others. There is some evidence that locus of control accurately predicts course or test grades and standardized test scores (McGhee and Crandall, 1968; Messer, 1972; Nowicki and Segal, 1974). The results of McGhee and Crandall's (1968) study suggests that teacher's grades reflect such factors as perseverance, initiative and effort, all of which figure into student's responses to locus of control measures, whereas standard achievement tests reflect such factors only indirectly by measuring acquired skills.

Research studies by Ames, Ames, and Felker (1976); Fitch (1970); Friend and Neale (1972); and Frieze and Weiner (1971) report that children tend to take more responsibility for their successes than for their failures.

The few causal analyses that have been done point to locus of control (effort, ability) as a cause of achievement rather than vice versa. However, the data is tenuous--future research models should be designed to see if there are any significant confounding variables affecting the results. Other potentially influential behavioral variables related to task situations have not been studied at all--e.g., attention; seeking assistance; understanding assignments; asking more questions; and volunteering answers more in class discussions (Stipek and Weisz, 1981). Although there are many intuitively appealing notions about cause and effect relationships, much of the research conducted to prove or disprove

the notions have been conducted in contrived laboratory research situations (Stipek and Weisz, 1981). According to these investigators, research on children's perceptions of control, for the most part, has been done in unnatural and highly constrained settings. However, they also indicate that some of the most impressive and educationally useful research examining the relationship between locus of control and achievement comes from classroom intervention studies. Intervention studies do demonstrate that an educational environment that encourages students to take responsibility for their learning can positively influence learning (Wang and Stiles, 1976; Matheny and Edwards, 1974; Arlin and Whitley, 1978).

Silvernail (1985) has provided the names and brief descriptions of some of the more widely used instruments for gathering data in the affective domain:

1. **Thomas Self-Concept Values Test** (Thomas, 1969)

   The TSCVT measures fourteen self-value dimensions such as sociability, ability, attractiveness, independence. The 14-item test is designed to be used with young children (4 to 6 years old). However, some caution should be exercised in interpreting test results given the problems of self-concept measurement in young children.

2. **Self-Esteem Inventory** (Coopersmith, 1967)

   The 59-item scale was designed by the author to measure general self, social self-peers, home-parents, and school-academic self, in addition to self-esteem. It is worded to be used with children 8 to 10 years old but has been used successfully with students in grades three through twelve.

3. **Self-Concept of Ability Scale** (Brookover, 1965)

The eight items contained in Form A are designed to measure self-concept of general academic ability; and the eight items in Form B are designed to measure self-perceptions of ability regarding science, mathematics, social studies, and English. The scale is most suitable for use with high-school-age students.

4. **Piers-Harris Children's Self-Concept Scale** (Piers and Harris, 1969)

The 80-item instrument measures general self-concept and may be used for both research and diagnostic work. The simple descriptive statements are designed to measure 10 self-concept dimensions and the scale is appropriate for use in grades three or above.

5. **How I See Myself Scale** (Gordon, 1968)

The HISM consists of 40 (elementary form) or 42 (secondary form) items developed for use with children ages 3 to 12 years. The scale has been found to measure five self-concept dimensions: physical appearance, interpersonal, teacher-student, academic ability, and autonomy.

6. **Self-Concept Inventory** (Sears, 1963)

The revised 48-item scale is designed to measure nine self-concept dimensions and general self-concept. This short, descriptive phrase scale is best suited for use with students age 10 or older.

According to Doebler, Lee, and Martin (1983) there are a number of measuring devices that can be used to assess affective dimensions of the classroom. These measures are described as follows:

EXAMPLES OF MEASURES

1. Counting Measures

   Count the number of instances in which students are (a) using learning centers, (b) making bulletin boards of displays, (c) asking questions, and (d) using books that are class related but not required. A high count relative to previous observations in one or more of these situations can offer a measure of the positive feelings that students have toward the class or the current subject matter. Setting a time limit in which the count is made may be helpful for the assessment.

2. Attitude Comparisons

   Ask students to place a check after statements related to preselected item or area of the curriculum. About three to five statements are sufficient and practical. For example, the roots of such social conflicts as race and religion basically are economic in nature: Strongly Disagree (-5), Completely Undecided (0), Strongly Agree (+5).

   The check is placed to indicate the extent to which students agree or disagree with the statement. There are no right or wrong answers. Differences in where the checks are placed (or even comparing the numerical totals) in a "before" and "after" administration of the same statements can help identify changes in student attitude, perhaps as a result of instruction.

3. Open-Ended Response

Ask students for their value judgment on what, if anything, from today's lesson was meaningful to them. This can be done, for instance, by talking to randomly selected students, by having students write their responses anonymously on paper or the board (with the teacher out of the room), by having a pair of students serve as samplers of the class and report to the teacher, or by asking students to respond to a question like: "What one thing did you like or dislike about this class?". The resulting information can provide an informal but highly meaningful measure of what the students value from what the teacher is doing.

4. Semantic Differential

Set up a series of rating scales of bipolar adjective pairs underneath a concept on which measurement of student attitude is desired. For example, the concept is: Learning poetry can increase your skill for observing candidates for student government--Comical 1 2 3 4 5 6 7 Serious; Worthless 1 2 3 4 5 6 7 Valuable; Abstract 1 2 3 4 5 6 7 Concrete.

After students respond by circling the number representing where they "are," add up the responses and compare with the total to obtain an overall indication of student attitude toward the concept. In the example above, a total score of 3 equals the most undesired attitude and 21 equals the most desired attitude.

5. Faces

Have pupils place a check under the appropriate face (e.g., a happy face, an expressionless face, or a sad face) that illustrates their feelings on the subject in which the teacher wishes to obtain a measurement, for instance, "How I feel about the lab experiment in this science unit...".

6. Checklists

Determine the affective aspect to be measured, and also determine the academic area in which it is to be measured. Develop a short list of behaviors that, if observed in a student, can provide evidence that the affective goal being measured has been achieved. Observe the selected student for a specified period of time (e.g., 20 minutes). Check as appropriate in the following example: Name of student _____; Date _____; Affective area--positive feelings; Academic area--reading in chemistry; Observation time--from _____ to _____:

A. _____ student smiles while reading a paper in class.

B. _____ student makes a positive statement about reading, such as "I can understand the formulas in this paper."

C. _____ student carries out a textbook reading assignment without being reminded.

7. Sentence Completion

Ask students to share how they feel by writing the completion to a given stem. The stem is chosen in relation to the area in which the teacher wishes to measure feeling. For instance, in the area of math, the stem might be: "When I need to add fractions, I feel _____."

8. Calculating the Ratio

To measure student feelings about risk taking in learning any subject matter, the following procedure might be used:

A. Tabulate the number of teacher remarks to wrong answers that communicate "That's a good try. Now let us see if we can improve it some."

B. Tabulate the number of teacher responses to wrong answers that communicate either (a) "You are wrong and you should do better than that" or (b) "This student missed that question. Who can tell this student the right answer?".

C. Divide the "good try" answers by the "bad try" answers.

9. Considering Connotations

Develop, with contributions from students, a list of words that relate to a desired area or topic. Then, tabulate positive and negative connotations that students have for these words, as shown in Table 3.

TABLE 3

Connotations: Topic-Girls on Class Committees

Word	# +	# -	+ or -
Able	1	1111	-
Delicate	1111	0	+
Adventurous	11	111	-

The completed tabulation offers a view of the students' value position on the topic or area being considered. In Table 3, the five students tallied seem to hold a stereotyped value position about females on class committees.

10. Criterion-Referenced Observation

To measure student's value with relation to literature offered in English class, for instance, simple and direct observations can be made. Such observations can be made. such observations should be tied to preselected and specific criteria. To illustrate:

A. (1) Does the student gravitate toward rather than away from an attractive display of paperbacks, anthologies, periodicals, and the like on a classroom table or shelf? (2) Does the student browse and read (thus suggesting a valuing of this literature)?

B. Does the student tell the teacher in a panel discussion or in private how one or another of the issues in an assigned novel is or is not preferred over his or her own beliefs?

Some form of note keeping should accompany the observation so that the student's current valuing system may be recalled and future changes noted.

Appendix B

RESEARCH RESULTS OBTAINED FROM STUDIES CONDUCTED IN THE AFFECTIVE DOMAIN

Many research studies have been conducted in the affective domain, with a variety of results. Contained in this chapter is a representative sampling of the research results that were reviewed while preparing this survey of the literature in the affective domain. Results reviewed include those obtained from both correlational and experimentally-designed studies and the findings are presented according to the topic investigated.

Motivation, Achievement and Anxiety

Sinclair (1985), in his review of theory and research dealing with student affective characteristics in the classroom, suggested that there are three types of student motives related to classroom learning and behavior:

1. Maintenance and enhancement of self-esteem;
2. Motives, such as curiosity, that are associated with exploratory behavior and a need to know and understand; and
3. Social motives, such as the need for praise, recognition, and attention.

When (1) above (maintenance and enhancement of self-esteem), is not accomplished in the classroom through achievement in academic areas, the student's self-esteem is eroded. "Anxiety" is a common trait of students who are constantly trying to cope with the threat of academic failure. High anxiety causes emotional and worry responses, distracting attention

away from the task at hand. Anxiety causes defensive behavior patterns that help preserve self-esteem, but at the expense of successfully dealing with the task. Defensive behaviors may include daydreaming, careless and impulsive work, feigning sickness, or truanting.

Anxiety, for instance, appears to interact with task difficulty in influencing student performance levels:

1. When there is high task-difficulty, low-anxious students out perform high-anxious students.
2. When there is low task difficulty, high-anxious students do better.

Sinclair's (1985) review of the literature on student affect in the classroom indicates that the student anxiety level and the teaching method used in instruction sets up an interacting effect:

1. High-anxious students prefer a highly organized, structured, and teacher-directed style of instruction with clear expectations.
2. Low-anxious students would prefer a student-centered style that requires use of initiative and independence, with discussions and student discovery.

Sinclair suggested a need to match teaching style with student characteristics, or, a teaching style which incorporates both sets of techniques to create a learning environment responsive to the particular needs of each student.

Despite these findings, studies have not been able to demonstrate a consistent superiority in classroom performance of students who have a high need for achievement.

The Effect of Teacher Emphasis on Affective Outcomes

Prawat and Nickerson (1985) conducted a study to determine if elementary teachers who place the highest priority on affective outcomes in education are the most effective in promoting positive affect in their classrooms.

The study involved 40 elementary school teachers identified as being "high affective", "high cognitive", or "mixed affective-cognitive orientation" depending upon their expressed emphasis in the classrooms, and 24 urban Michigan schools. Results were analyzed using Q-Sorts, ANOVA, and MANOVA. The results obtained from this study are as follows:

1. High-affective teachers are no more effective in promoting cross-race interactions than the mixed group.
2. The overall pattern of results indicate that it is the mixed orientation teachers who are superior.
3. Teachers with strong affective orientation were less effective than mixed clusters teachers in promoting affect in the classroom.
4. The affective teachers appeared to be no more effective in promoting positive affect in the classroom than the cognitive group.
5. Valuing affect for its own sake may be counter-productive in terms of both the affective and academic growth of students.

According to Prawat and Nickerson (1985), on the basis of the data obtained from their study, there was little evidence that teachers who stress affective outcomes are necessarily more "affective" (such as "accepting", "encouraging", "democratic", "praising", or "promoting self-sufficiency", or "warmth") in their classroom behavior than teachers who either stress cognitive outcomes or weight cognitive and affective outcomes equally.

Student Self-Esteem

The study on student self-esteem conducted by Calsyn et al. (1984) involved one class of sixth graders (14 boys and 10 girls) who were the treatment group and one class of seventh graders (six boys and 14 girls) who were the control group. The treatment program consisted of 13 sessions of 1 and ½ hours each conducted over a seven week period. The data were analyzed using ANCOVA.

The results of this study revealed the following:

1. Girls probably benefited more from the treatment program than boys.
2. The results of the study conflict with other studies (e.g., Calsyn et al. 1980) showing no program effect favoring either boys or girls, and studies finding significant treatment effects for boys.

Calsyn (1984) concludes his study by commenting that "...the amount of improvement in self-esteem and other affective dimensions accomplished to date, by various affective education curricula, has been quite modest." He further asserts that "...research on the effectiveness of affective education programs in improving the self-esteem of children has revealed as many findings of no differences as positive findings."

Affective Factors in School Learning

Walberg (1984) synthesized 3,000 international studies, and a summary of the findings indicated that nine factors account for the bulk of school learning that takes place. Several of these factors are affective:

(A) Student Aptitude

1. Ability prior to achievement
2. Development

(affective) 3. Motivation (or self-concept)

(B) Instruction

4. Amount of time spent learning

(affective) 5. Quality of instructional experience, including psychological aspects

(C) Environmental Factors (including an educationally stimulating psychological climate)

(affective) 6. The home

(affective) 7. The classroom social group

(affective) 8. The peer group outside of school

9. Use of out-of-school time (amount of time spent viewing television)

According to Walberg (1984), the single most significant specific finding was that IQ is the most potent factor in general academic learning (.71 correlation), whereas motivation correlates at .34, and self-concept correlates at .18 with general academic learning. In other words, IQ accounts for one half the variance in learning, motivation accounts for only ten percent in general academic learning and self-concept accounts for only a little over three percent of the variance in general academic learning.

Other significant research findings coming out of the review of literature by Walberg (1984) include the following:

1. Instructional effects, including 27 factors, show such possible affective characteristics as reinforcement, cues and feedback, and cooperative learning as being three of the top six instructional effects of general academic learning.
2. The psychological atmosphere, or climate of the classroom group, for example, strongly predicts end-of-course measures of affective, behavioral and cognitive learning.

3. Research conducted by Giaconia and Hedges (1982) found that programs that are effective in producing affective outcomes— attitude, creativity and self-concept--sacrificed academic achievement on standardized measures.

Student Perceptions of Affective Teacher Qualities

Laminack (1985) conducted a survey of teacher education undergraduates to "...identify the qualities represented by their best elementary school teacher." The students responded to open-ended questions. The results of the student's descriptors are as follows:

TABLE 4
Descriptors of Good Teachers
(Taken from Laminack, 1985)

Classroom Management	Personality	Strategies Techniques	Appearance
flexibility	loving	variety	young
organization	caring	new ideas	pretty
equal	helpful	clarity	well-dressed
fair	enthusiastic	interesting	jolly
respect	encouraging	inductive	happy
firm	perceptive	concrete	attractive
even-tempered	warm	visual aids	
diplomatic	vivacious	centers	
disciplinarian	positive	participation	
	patient	individualized	
	compassionate	read aloud	
	cheerful	involved	
	understanding	parents	
	sensitive	discussion	
	honest	supplements	
	tactful		
	genuine		
	attentive		
	open-minded		

Of the four category headings in the table above, the "Personality" heading, an affective characteristic, contains the longest listing of descriptors. According to Laminack and Long (1985) "...the overwhelming majority of the responses of these undergraduates focus upon the affective qualities of teachers."

Self-Concept and Academic Achievement

Byrne (1984) conducted a comprehensive review of research in the area of self-concept and its relation to academic achievement. In reviewing this research, Byrne (1984) concluded that students hold certain attitudes about themselves and their abilities, which ultimately have a strong impact on their academic performance in school. However, it also appeared that past performance has a heavy influence on attitudes that students develop about themselves and their abilities.

The studies reviewed by Byrne (1984) dealt primarily with students' general self-concept (GSC), academic self-concept (ASC), and the relationship to academic achievement (AA). A listing of the studies reviewed, the sample of students that were involved in the study, the measuring instrument utilized, and the correlation coefficients obtained in analyzing the data, are arranged in Table 5 on the following page:

TABLE 5
(taken from Byrne, 1984)

Study	Sample	Instrument	GSC/AA	ASC/AA
Correlational Studies				
Associational				
Butcher (1968)	N = 120 Grades 3-6	Coopersmith SEI		
Caplin (1969)	N = 180 Grades: intermediate, elementary Blacks/whites	Horace-Mann SCS	.52	.58
Joiner, Erickson, Critenden, & Stevenson (1969)	N = 1,880 Grades 10-12 (a) acoustically impaired n = 80 (b) nonimpaired n = 1,800	Brookover SCAS (adapted)		.45[a]
Marsh, Smith & Barnes (1983)	N = 654 Grades 5, 6	Marsh SDQ		.18[b]
Marx & Winne (1975)	N = 98 Grades 5, 6 Black/low SES	Sears SCI		
Marx & Winne (1980)	N = 341 Grades 4-6	Gordon HISMS Piers-Harris CSCS Sears SCI Muller & Leonetti (1973) PSCI	.36[c]	
Mitchell (1979)	N = 143 Grades 10-12	Mitchell QOSG		
O'Malley & Bachman (1979)	N = 3,183 Grade: senior high school	Rosenberg SES (adapted)	.29[d]	
Park (1980)	N = 50 Ages 9-21 Moderately retarded	Muller & Leonetti (1973) PSCI		
Piers & Harris (1964)	N = 363 Grade 6	Piers-Harris CSCS	.36	
Towbridge (1972)	N = 3,789 Grades 3-8 Low/middle SES, urban/rural, black/white	Coopersmith SEI	.40[e] -.01[f]	
_____ & Soares	N = 514	Soares & Soares		

TABLE 5 (continued)

Study	Sample	Instrument	GSC/ AA	ASC/ AA
	Grades 4-8 (a) disadvantaged n = 229 (b) nondisadvantaged n = 285	SPI		
Winne, Woodlands & Wong (1982)	N = 170 Grades 4-7 (a) learning disabled n = 52 (b) normal n - 60 (c) gifted n = 58	Coopersmith SEI Sears SEI		
usal (SC -- AA)				
Bailey (1971)	N = 100 Grade: first year college	Bailey SC Bailey ISC		
Brookover et al. (1962, 1965, 1967)	N = 7,026 Grades 7-12 6-year longitudinal study	Brookover SCAS		.57
Campbell (1967)	N = nr Grades 4-6	Coopersmith SEI	.31	
Evans & Anderson (1973)	N = 126 Grade: junior high school (a) Mexican American n = 87 (b) Anglo American n = 39	Self-desinged		
Kubiniec (1970)	N = 468 Grade: first year college	Self-designed		
Lamy (1965)	N = 52 Grade 1	Observations Interviews Projective test		
Reynolds (1982)	N = 203 Undergraduate college	Reynolds ASCS Rosenburg SES	.06	.46
Wattenberg & Clifford (1964)	N = 128 Grade: kindergarten	Tape recordings		
Causal (AA -- SC)				
Bridgemann & Shipman (1978)	N = 404 Grades: preschool, kindergarten, 1 Low SES 6-year longitudinal study	Brown IDS-SCRT Coopersmith SEI		

TABLE 5 (continued)

Study	Sample	Instrument	GSC/ AA	ASC/ AA
Centi (1965)	N = 79 Grade: first year college	Self-designed		
Coleman et al. (1966)	N = 700 Grades 3, 6, 9, 12	Coleman SST		
Kiefer (1975)	N = nr Grades 2, 4-8	Brookover SCAS Coopersmith SEI Crandall IAR	.35[cd]	.40[cd]
Roth (1959)	N = 54 College reading improvement classes	Q Sort		
Smith (1979)	N = 147 Ages 7-12 Learning disabled	Piers-Harris CSCS		
Multitrait-multimethod analysis				
Marsh, Parker & Smith (1983)	N = 958 Grades 5, 6 (a) lower middle/low SES n = 655 (b) low SES n - 180 (c) high SES n = 125	Marsh SDQ		.17 .14 .43
Marsh, Smith, Barnes & Butler (1983)	N = 671 Grades 4-6 (a) lower middle/low SES n - 528 (b) middle SES n = 143	Marsh SDQ		
Causal modeling				
Bachman & O'Malley (1977)	N = 1,608 Grades 10-12 Males only 8-year lognitudinal study	Rosenberg SES (adapted)		
Byrne (1982)	N = 929 Grades 9-12	Brookover SCAS Coopersmith SEI Rosenburg SES	.16	.41[g]
Calsyn & Kenny (1977)	N = 556 Grades 8-12 5-year longitudinal study	Brookover SCAS		.56
Moyer (1980)	N = 6,198 Grades 9-12	nr		

TABLE 5 (continued)

Study	Sample	Instrument	GSC/ AA	ASC/ AA
Pugh (1976	N = 724 Grades: senior high school Males only Blacks/whites	Coleman SST (revised)		.23[h]
Shavelson & Bolus (1982)	N = 99 Grades 7, 8	Brookover SCAS Fitts TSCS Piers-Harris CSCS	.12[i]	.37
I. Experimental Studies				
Ames (1978)	N = 112 Grade 5	Piers-Harris CSCS		
Gibby & Gibby (1967)	N = 60 Grade 7	Gibby & Gibby IRS		
Hayes & Prinz (1976)	N = 208 (a) mildly retarded Ages: nr n = 104 (b) nonretarded Ages: 8-11, 12-16 n = 104	Identification of photo		
Strang, Smith & Rogers (1978)	N = 70 Ages: 6-11 Academically handicapped	Piers-Harris CSCS		

Note: nr - not reported.
a mean correlation across impairment.
b reading achievement.
c mean correlation across grades.
d mean correlation across sex.
e mean correlation of low SES scores.
f mean correlation across SES.
g total sample at eighth grade.
h mean correlation across race.
i mean correlation across achievement measures.

Judging from an overview of the studies presented in Table 5, and generalizing the findings to different populations, there appears to be a persistent relationship between a student's self-concept and his or her academic achievement. As indicated earlier, because the bulk of the research that has been conducted in the area of self-concept is correlational, cause and effect relationships cannot be established between self-concept and academic achievement. However, Byrne suggests that, although findings appear to conflict somewhat, the weight of the evidence suggests that self-concept appears to influence academic achievement. Byrne also indicates that Brookover et al. (1967) concluded from their studies that changes in students' self-concept of ability were associated with parallel changes in academic achievement.

The overall conclusion to be drawn from the review of studies conducted by Byrne (1984) is that students hold certain attitudes about themselves (General Self-Concept) and their abilities (Academic Self-Concept) which ultimately have a strong impact on their academic performance in school, but that it also cannot be denied that scholastic performance has a heavy influence on the attitudes that students develop about themselves and their abilities. Some researchers (Bridgeman and Shipman, 1978) have concluded that a student's academic self-concept develops as a reaction to, rather than as a cause of, his or her academic achievement in school.

In reviewing the studies that are presented in Table 5 above, Byrne indicates that both the correlational and experimental studies have revealed a positive correlation between self-concept (GSC and ASC) and academic achievement (AA) across a variety of populations. Byrne points to the Williams (1973) study as the only one which does <u>not</u> show a

relationship between the two constructs of self-concept and academic achievement. Byrne also indicates that the many associational and causal studies reviewed, show the relationship between academic self-concept (ASC and academic achievement (AA) to be stronger than the relationship between the student's general self-concept (GSC) and academic achievement (AA). Finally, Byrne concludes that the causal predominance between self-concept and academic achievement has not been fully confirmed.

Research conducted by Purkey (1970) and others, indicates that there appears to be general agreement that those who under-achieve scholastically, or those who do not meet their own academic expectations, suffer significant losses in their self-esteem.

Coleman and his associates (1966) concluded that the relation of self-concept to academic achievement "is probably more of a consequence than a cause of scholastic achievement." However, in their review of published studies and 18 doctoral dissertations concerned with the impact of intervention programs on the self-concept and academic achievement of children, Scheirer and Kraut (1979) found no evidence of a causal connection between self-concept and academic achievement. They caution educators against believing that improvement in a student's self-concept will result in improvement in the student's level of academic achievement. Other research results have noted that nowhere has it been convincingly demonstrated that intervention programs lead to improved self-concept in addition to increased academic achievement levels.

Self-Concept and Absenteeism

In a study conducted by Reid (1982), the relationship between absenteeism and self-concept was examined. The study involved 77 persistent absentees in British high schools. The control group involved 384 students at the high school level. ANOVA, t-tests and Chi-Square, were used to analyze the data.

The purpose of the study was to assess the self-concept and self-esteem of the absentees, and their relationship to attitudes, goals, behaviors, and responses. "Self-concept" was defined as how you see yourself, and "self-esteem" was defined as a value you put on yourself. It is known that both self-concept and self-esteem are influenced by school experiences, and that the classroom is viewed as a social system in and of itself. In that environment, a teacher must deal with self-concepts, intellectual potential, and academic progress.

The results of the study by Reid (1982) indicated that far more of the absentees had parents who were divorced, separated, remarried, deceased, unmarried (but living together) or single. Other results of the study were as follows:

1. The absentees had become accustomed to failure at home and at school more than their peers had.
2. Students who perpetually receive low grades absent themselves more from school.
3. A majority of the absentees came from deprived backgrounds.
4. The absentees had unfavorable home circumstances.
5. The absentee's attitudes towards school will change when their self-concepts change and vice versa.

Self-Concept and Self-Perception

In his synthesis of the research on self-concept, Beane (1980) describes "self-perception" as having three dimensions:

1. Self-concept - Description we hold of ourselves based upon the roles we play and the personal attributes we believe we possess.
2. Self-esteem - Refers to the level of satisfaction we attach to the above description.
3. Values - Determine how we esteem ourselves (positively or negatively).

Self-Concept Related to Time Spent in School

- According to Beane, research by McGuire et al. (1979) indicates that a student's sense of self is tied to academic performance and the quality of the relationships he/she has with fellow students and teachers. McGuire et al's. (1979) research involved 560 students in grades 1, 3, 7, and 11. Of those interviewed, 11% of the interview responses related to school. McGuire's research showed a progressive relationship between the amount of time a student is in school over the years and the extent to which his/her self-concept is related to the school situation. Five percent of the first grader's self-concept responses were related to school topics, whereas 15% of the 11th grader's self-concept responses were related to school topics.

By the 11th grade, as a student progresses through school, the self-concept becomes more and more tied to (1) academic achievement, and (2) the quality of the relationship he/she has with fellow students and teachers. The research conducted by Lipka, Beane, and Ludewig (1980) also confirmed that there is an increased tie between self-concept and school as the

student moves through the grade levels (.58 school-mentions in kindergarten and 2.31 school-mentions per 12th grader). This research study (Lipka, Beane, and Ludewig, 1980) involved 1,102 K-12 students who were asked to tell interviewers about themselves as a part of a study to further describe "self-concept" as it relates to students in the learning situation. In the interview, the students were asked, "Tell me about yourself." The student was allowed to generate his/her own list of self-concept descriptors. In this study there were 8,955 self-concept mentions, of which 1,524 (or 17%) related to school.

Self-Concept and Achievement

Research conducted by Scheirer (1979) in the affective area, was based upon the notion that a child's feelings about himself/herself are a key factor in the child's ability to achieve in school. According to Scheirer "...little direct evidence exists in either psychological or sociological literature that self-concept has an independent influence on behavior." Education intervention programs have shown some evidence that self-concept can be changed, and data from studies reviewed by Scheirer show that empirical evidence exists indicating self-concept enhancement is a significant causal factor in educational achievement. Several correlational self-concept studies have also shown a strong relationship between self-concept and achievement. For example, Brookover and Thomas (1964) using data from over 1,000 urban seventh graders found correlations of .42 for boys and .39 for girls when comparing the relationship between "grade-point average" and "self-concept of ability", after controlling for measured intelligence. The results showed relationship, but no cause and effect correspondence.

Federally-funded Programs to Improve Student Self-Concept

There have been several large-scale, federally funded programs designed to emphasize self-concept and motivation in students at all educational levels K-12. Federal programs, such as Head Start for preschoolers, Follow Through for the primary grades, and Upward Bound for high schoolers, were designed to improve the student's self-concept. Evaluation studies of Head Start showed little improvement in either student "self-concept" or academic achievement.

Studies conducted by Stallings and Kaskowitz (1974), involving a national evaluation of Project Follow Through, did not support open education theory that a positive self-concept must be the basis for educational progress.

The same study showed that highly-structured instructional programs in Follow Through resulted in the greatest amount of increased student self-esteem and achievement.

Research conducted by Brookover et al. (1967), involving a longitudinal study of 463 students in grades 7-10 in an urban school system, found that a change or stability in "self-concept of ability" was positively associated with a student's change or stability in grade point average. The same study also found that self-concept seems to be an outcome variable rather than an intervening or causal variable.

Self-Concept Research Findings Contained in Doctoral Dissertations

Scheirer (1979) reviewed 18 doctoral dissertations dealing with the linking of change in self-concept with academic achievement. The results of this review of the doctoral dissertations indicated that (1) in no case

were changes in achievement unambigously associated with changes in self-concept, and (2) results showed that most intervention produced some effects on either self-concept or academic achievement, but not on both.

Scheirer's (1979) concluding statement, after reviewing the data presented in the doctoral dissertations, is as follows:

> The overwhelming negative evidence reviewed here for a causal connection between self-concept and academic achievement should create caution among both educators and theorists who have heretofore assumed that enhancing a person's feelings about himself would lead to academic achievement (page 145).

Student Self-Concepts Related to Teacher Behavior

In research conducted by Spaulding (1964) it was found that a positive relationship between pupil self-concepts and teacher behavior is characterized by a high degree of:

- Private or semi-private communication with children.
- Overt facilitation of task-oriented behavior.
- Concern for divergent responses in children.
- Attentiveness to student needs.
- The use of control techniques involving humor.

And a low degree of:

- Negative evaluation.
- Domination through threat.
- Firmness in tone.

Teacher Affective Responses of "Anger" and Sympathy"

Graham (1984) writes about two experiments, in which she was involved, regarding the affective responses of teachers and students. In her review of the literature, in the preliminary part of her report on her research findings, she talks about "sympathy" and "anger" as responses by teachers

that are determined by the teacher's perceived controllability of outcomes. Graham's review of the literature refers to research conducted by Hoffman (1975) and Averill (1978) which found that "sympathy" is a teacher response to the results obtained by students with low ability, and "anger" is the teacher response to students who need to try harder because the student is perceived as having more ability than he/she is demonstrating. Sympathy is evoked from the teacher because the student's academic results are attributable to an uncontrollable factor--low ability, whereas anger is evoked from the teacher when a controllable factor such as "effort" is involved, and by trying harder the student could directly affect academic outcomes.

In the two experimental studies referred to by Graham (completed in 1982), the results indicated that (1) the angry teacher believed the student hadn't tried hard enough, and (2) the sympathetic teacher thought the student was of low ability. Graham concluded that cognition (thinking) preceeds affect (emotions), and a change in cognition will result in a change in affect. For example, if a teacher perceives a student turning in a late paper as due to a late start, or laziness, the teacher becomes angry. But, if the teacher later finds out that the student's mother died, just as the student had explained as the reason for the late paper, then the teacher becomes sympathetic.

The student response to the teacher expressing sympathy for failure, is one of feeling bad, because the student perceives the teacher's response as one which implies lack of ability in the student. The student feels good if the teacher expresses anger because the teacher's response implies that the student has the ability, and could improve his or her performance by trying harder. In other words, the teacher's emotional reactions convey evaluative information to the students.

A model which depicts the teacher-student interaction regarding "sympathy" and "anger" is shown below:

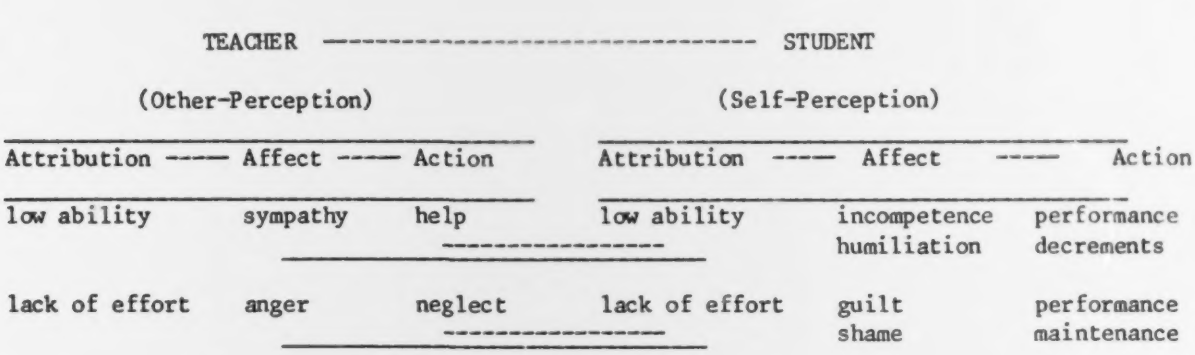

Figure 1 — An attribution-affect-action sequence following failure (taken from Graham, 1984)

It should be mentioned that the experiments referred to by Graham (1984) were conducted in laboratory settings. "Anger" and "sympathy" emotions were not examined under actual classroom conditions.

A summary of Graham's (1984) findings are as follows:

1. Sympathy from a teacher can indirectly transmit a low-ability message.
2. Praise for success at easy tasks, and the absence of criticism for failure at these tasks, can communicate to the recipients that they are low in ability.
3. Students who receive help from a teacher are perceived by others and themselves as low in ability ...this may have negative consequences such as praise or the offering of help may convey to the students that they are low in ability.

4. Instructional strategies that entail help-giving, such as special class placement and remedial tutoring, may produce negative results in that "... evidence mounts that these practices lead to neither improved student performance, nor enhanced self perception of ability." (p. 102)

The main idea conveyed by Graham (1984) is that attribution principles can facilitate our undertanding of how certain well-intentioned teacher behaviors may, at times, have unexpected or even negative consequences.

Cooperative Learning Experiences

Johnson and Johnson (1985) have conducted research on "cooperative learning," which their research indicates is a powerful instructional technique that prospective teachers can use to foster interpersonal growth and academic growth. They claim that cooperative learning has great potential for engendering student learning, but that it is not used much in classrooms. In their research, Johnson and Johnson found that teachers use three possible goal structures:

1. cooperative
2. competitive
3. individualistic

Their extensive research strongly supports structuring the classroom to facilitate students' working cooperatively.

Johnson and Johnson's research is based on the original theory of cooperative education developed by Morton Deutsch in the late 1940's (his theory is based on work by Kurt Lewin dealing with motivation).

The three possible classroom goal structures (cooperative, competitive, and individualistic) are defined by Johnson and Johnson as follows:

1. Cooperative situation
   - is an interaction pattern
   - goals of individuals are linked together
   - results in a positive correlation among students' goal attainments
   - individual attains goals only if all participants' mutual goals are attained
   - each person seeks an outcome that is beneficial to all those with whom he or she is cooperatively linked
2. Competitive situation
   - results in a negative correlation among goal attainments
   - individual attains his or her goal only if other participants cannot attain theirs
   - person seeks an outcome that is personally beneficial but the attainment of which is detrimental to others with whom he or she is linked
3. Individualistic situation
   - no correlation among participants' goal attainments
   - attaining a goal has no effect upon whether others attain their goals

Over 1,000 studies, dating back to the late 1800s were examined by the Johnson brothers, using meta-analysis to evaluate the effects of the three approaches on student achievement. The research findings have confirmed the following:

1. Cooperative learning experiences tend to promote more learning than either "competitive" or "individualistic" learning experiences.
2. Research findings favoring cooperative learning experiences remained constant for age groups, subject areas, and types of learning activities.
3. Achievement increased to a greater extent among all three groups when learning tasks were more difficult (e.g., problem-solving, divergent thinking, decision-making, conceptual learning).
4. Lower 1/3 of class, in ability, gains the most in achievement when using cooperative education learning experiences.
5. Need to talk about information and ideas contributes most to achievement gain, rather than the students just thinking about them.
6. Research shows retention of information is enhanced by cooperative education learning approach.
7. Motivation to learn is promoted.
8. Effects of group success seem to be greater than individual feeling of success.
9. More positive attitudes toward instructional experiences and instructors occur.
10. Higher levels of self-esteem are produced.
11. Perceptions that other students care about how much one learns are strengthened.

12. Greater acceptance of differences and interpersonal attraction among students from different ethnic backgrounds and among handicapped and nonhandicapped students are promoted.

The ideal classroom should include all three types of learning experiences, carefully orchestrated by the teacher. In actuality, few public school classrooms use small group learning situations (only 7%-20% of the time).

Johnson and Johnson identify five aspects of cooperative learning in the classroom:

1. The students sit close to each other, in small 2-3 member groups and discuss material.
2. There is a strong sense of positive interdependence with a group goal and a group reward.
3. There is a strong sense of individual accountability--instructor moves around room and among groups.
4. The instructor monitors group for (1) how group members are interacting, and (2) the quality of interaction that took place within the group.

Johnson and Johnson also point out the implications "cooperative learning" has for teacher training programs. They include the following:

1. "How to structure student-student interactions" in the classroom should be taught in the first course students take in methods courses and in field-based micro-teaching sessions.
2. Cooperative education should be modeled by instructors in education classes since it is just as powerful a tool for adult education as it is for children.

The cooperative education techniques modeled in the teacher training programs should include the following:

1. There must be planned time during lectures to have students turn to person next to them and interact regarding some aspect of the instructional material. This tends to increase students' willingness to participate in general discussion afterwards, i.e., students participate more in learning.
2. Focus Trios (3 students) are given 3-4 minutes at beginning of class to predict a solution or response. At end of class, ask the trio to agree on the three most important things gleaned from the day's lesson.
3. Base Group is a long-term group which lasts through the quarter. They may take quizzes together, study for exams together, or just meet to discuss various class activities, and what they have done toward completing class assignments.

Johnson and Johnson's (1985) research indicates that cooperative learning experiences have the following impact on students and the classroom situation:

1. increased achievement
2. more positive attitudes
3. a climate of acceptance of differences
4. a positive effect on many other learning outcomes.

Teacher Consultation and the Affective Domain

Strein and French (1984) surveyed expert opinion regarding teacher consultation in the area of the affective domain. The idea was that student affective growth could occur through a counselor's consultation with the student's teachers. Consultation with teachers has long been considered one of the primary roles of the school counselor (Furlong, Atkinson, and Janoff, 1979; Lamb and Deschenes, 1974), and will become increasingly more important in the future (Dinkmeyer and Dinkmeyer, 1978; Faust, 1968).

Strein and French (1984) conducted their "survey of experts" to determine what skills, concepts, and attitudes were necessary for teachers to have in order to foster affective growth in students, and that the counselors would be familiar with so that they could provide training to the teachers regarding the necessary skills, concepts and attitudes. These researchers found that there are a vast variety of publications dealing with this issue (i.e. what teaching skills, concepts and attitudes are considered necessary to foster students affective growth) and they often present a confusing picture. To reduce this confusion, a survey was conducted with a panel of experts to determine the key skills, concepts, and attitudes necessary for teachers to foster the affective growth of their students.

"Experts" were identified by sending letters to 59 authors who had written at least one book or three articles during 1967 to 1977 relating to the general topic of student's emotional well being in the schools. 148 persons were recommended to be on the panel of experts and through careful screening 28 received substantially more nominations than others. Of the 28 finalists identified, 13 experts agreed to serve on the panel. Based on a review of existing literature, the panel of 13 experts developed a

questionnaire which included 71 items on teacher skills, 31 items on concepts, and 25 items on attitudes. The questionnaire items addressed the thinking reflected in the three major schools of counseling and psychological theory--behaviorism, humanism, and psychoanalysis. Each item was to be rated on a seven-point scale, with the ratings ranging from one (unnecessary) to seven (essential) in terms of the importance to teachers possessing that skill, concept, or attitude to foster students' affective growth. The results of the 13 experts were tabulated to define a list of essential teacher skills, concepts, and attitudes. Items were considered essential only if 75 percent of the experts responded with a rating of 5, 6, or 7, and if the overall mean response to the item was at least 4.0. Of the 71 skill items on the questionnaire, the experts selected the following 30 as being essential to foster students' affective growth:

1. having general teacher/learner communication skills;
2. using reflective listening;
3. using "I" messages;
4. using problem-solving and decision-making techniques (nonspecific);
5. helping learners to increase their own problem-solving skills;
6. helping learners to increase their own ability to make decisions;
7. increasing learners' involvement with making rules in the classroom;
8. using effective discipline methods (nonspecific);
9. using nonpunitive discipline methods;
10. using classroom activities designed to increase learners' self-esteem;
11. increasing learners' acceptance of other children and adults;
12. helping learners accept themselves, their families and their own cultures;

13. helping learners to increase self-control;
14. increasing cooperation and cooperative work among learners in the classroom;
15. helping learners to learn acceptable outlets for strong emotions, especially anger;
16. structuring learners' work so as to ensure an adequate amount of success;
17. integrating cognitive and affective learnings and goals (confluent education);
18. having general group discussion and group leadership skills;
19. having a general skill in at least one (any) method of counseling;
20. having skill in crisis counseling and intervention;
21. using creative writing for affective development;
22. using children's literature as a resource for affective development (bibliography);
23. using role playing in the classroom;
24. establishing trust between the teacher and the learner;
25. knowing teacher's own self-awareness (nonspecific);
26. having awareness of and ability to deal with teacher's own emotions as they arise in the classroom;
27. having skill at expressing own <u>real</u> feelings;
28. having skill at the deliberate modeling of acceptable behavior;
29. having awareness of own philosophy of education and skill at using it as a day-to-day guide; and
30. having ability to laugh at one's self and one's dilemmas.

The experts' list of essential teacher attitudes (Table 6) included 21 of the 25 attitudes on the original list that were identified as being essential in fostering student emotional growth:

TABLE 6

(Taken from Strein and French, 1984, p. 343)

1. preference for (or commitment to) long-term goals as well as immediate gains;
2. belief that teachers <u>can</u> have an impact on the development of emotional well-being of their learners;
3. belief that teachers <u>should</u> have an impact on the development of emotional well-being of their learners;
4. belief that the teacher/learner relationship should be one of mutual trust;
5. belief that facilitating the development of emotional well-being should be a part of the school's objectives;
6. belief that affective learnings are at least as important as cognitive learnings;
7. attitude of great respect for the confidentiality of learners' personal communications;
8. belief that children should be treated differently according to their individual needs;

TABLE 6 (continued)

9. commitment to avoidance of unnecessary failure for each learner;
10. decreased accent on rigid grading systems (standards) for all learners;
11. willingness to listen to children's thoughts and feelings;
12. genuine interest in learner's ideas and feelings;
13. attitude of positive expectation--expecting the best of each child;
14. acceptance of learners as unique individuals;
15. acceptance of personal worth of all learners;
16. acceptance of cultural, ethnic, and racial diversity;
17. acceptance of negative feelings toward some learners;
18. acceptance that no teacher can help all learners;
19. commitment to own continual emotional growth;
20. importance of teachers' own self-esteem (personal worth); and
21. importance of teachers' self-confidence in the role as teacher.

According to the research on teacher consultation and the affective domain, and the experts that were interviewed in the survey, the experts' recommendations included the following:

- Effective teacher/learner communication, and increasing students' independence while fostering the development of problem-solving and decision-making skills in addition to being the kinds of skills emphasized by the experts, also form the basis of most of the work in affective education.

- Effective discipline and teaching self-control also is essential.
- No one method of counseling was endorsed except crisis counseling and intervention.
- Not essential for teachers to possess skills in such areas as increasing students' self awareness, social skills, assertiveness.
- No one discipline method was endorsed.

The experts surveyed also agreed that the teacher's own self-awareness and self-confidence are very important aspects of affective education. This notion is bolstered by the finding of Kameen and Brown (1975) that "...changes in student affective variables are often preceded by similar changes in their teachers."

Self Perception and School-Related Variables

A summary of the results contained in the review of literature conducted by Beane (1980) in the affective domain indicate the following:

- Of hundreds of studies conducted, a persistent relationship was found between various aspects of self perception and a wide variety of school-related variables (Wylie, 1979).
- Variables found to be related to student's self-concept are:
  (1) School achievement;
  (2) Perceived social status among peers;
  (3) Participation in class discussions;
  (4) Completion of school;
  (5) Perceptions of peers and teachers of the individual;
  (6) Pro-social behavior; and
  (7) Self-direction in learning.

. Beane (1980) comments that continuing problems in self-concept research include: (1) imprecise and varying definitions; and (2) inappropriate instrumentation.

Results of Allender's (1982) Review of Research in the Affective Domain

(a) Self-Concept and Task-Oriented Behavior

In his review of the affective domain literature, Allender (1982) found that techniques for improving, or addressing the affective needs of students, included (1) discussion, (2) role-playing, and (3) cooperative problem-solving. His review of the research showed that there is a positive relationship between a measure of self-concept and task-oriented behavior. According to Allender (1982), it is difficult to document that changes in self-concept affect achievement, but that studies have been conducted showing that achievement is affected by affective variables. For example, Condon (1978) found that a relationship exists between interest and curiosity, and improvement in reading.

(b) Classroom Management

Allender (1982) found little research directly related to affective approaches to classroom management. School is a place where feelings and emotions can be expressed constructively, and academic goals can be integrated with personal growth. According to Allender (1982) competition for grades works against positive attitudes among students for each other's success and achievement.

(c) Confluent Education

Allender (1982) talks about "confluent education", which refers to the interdependency of affective and cognitive learning as a concomitant of their interdependence in human brain function. Left- and right-brain research has revealed their interdependent functioning, with the left hemisphere of the brain dealing with orderly and logical functioning, while the right side functions in a more intuitive and holistic manner, especially in regard to imagery capabilities.

Affective Outcomes as Dependent Variables

Many educators say that improving the individual student's self-concept should be a prime aim of schooling in itself (the Head Start Program is a good example). Some training programs have emerged which develop teaching styles to enhance pupil self-concept (Tanner, 1978). Other programs have been designed to encourage the students' positive self-feelings (Favero, 1979).

The research paradigm for affective education is not tied to having academic achievement as a dependent variable. Non-cognitive variables (feelings, attitudes, beliefs, interests, motives, needs, curiosity, temperament, social sensitivity, coping strategies, creativity, and values) become the outcomes or dependent variables. Allender (1982), in his review of the affective domain literature, indicates that affective education often refers to (1) mental health, (2) personal growth, (3) values education, (4) group development, (5) classroom management, (6) confluent education, (7) mental imagery, and (8) student-directed learning. Competition for grades, according to Deutsch (1979), is our dominant

cultural norm for evaluation, and works against positive attitudes among students for each other's successful achievement. Special care is needed not to foster in children, negative images of their abilities and potential.

Affective Teacher Training

Anderson and Ching (1985), writing on affective teacher education in the International Encyclopedia of Education, suggest that teacher education focuses too much on the development of the teacher's knowledge and skills, and that recent training programs focus on teacher performance-based and competency-based systems. They indicate there is a need to train teachers to become aware of the emotional reactions of students (e.g., empathy to respond to emotions, and ability to recognize teaching strategies which consider the emotional needs of the students). Brown (1975), reporting on affective teacher education programs, states that teacher interns with an affectively trained student group improved significantly over a comparison group. The trained student group was tardy less than 1/3 as often as the comparison group, and were absent from school nearly half as often.

Anderson and Ching's (1985) review of a variety of research studies concluded that:

- Interpersonal skills can be transmitted to teachers.
- Teachers who possess these interpersonal skills are more effective in their classrooms, in terms of students' behavior, attitudes, and achievement.
- Whether teachers' feelings of self-awareness can be altered has not been made clear from available research.

- Few, if any, studies suggest a clear relationship between teachers' feelings and self-awareness, and student behavior, attitude, and achievement.
- Research on teachers' feelings, emotions, and self-awareness is scant.
- Anderson and Ching (1985), in their review of teacher affective education research, referring to the results of studies conducted by Oren (1983), indicate the following:
  (1) In classrooms where the feedback structure is rich, more specific, and individualized, the attributional tendencies of low achievers are closer to those of high achievers.
  (2) Internal attributions of ability and effort are associated with high achievement.
  (3) External attributions dealing with luck and task difficulty are associated with low achievement and learned helplessness.
  (4) Persons believing their successes and failures are contingent on their own behavior will be more likely to persist in seeking further achievement goals.
  (5) Persons who do not believe that their behavior can produce successful outcomes, and do not assume responsibility for the outcomes, will not exert effort to achieve success.

The results from Oren's (1983) study were based upon research conducted in regular classroom settings with a sample of 21 classrooms from three schools in the San Francisco area. The sample included 559 fifth and sixth graders from a variety of SES and racial backgrounds.

Teacher's Level of Interpersonal Affective Skills

Aspy and Roebuck's (1979) study found that teachers who train in higher interpersonal skills had the students with "significantly fewer disruptive incidents and significantly less severe problems". The strength of the relationship indicated that about 1/3 of all disruptive behavior in classrooms can be accounted for by the variance in teacher levels of personal skills.

Carkhuff (1982), referring to the human resources development for developing interpersonal affective skills, reports on a summary of 28 studies involving more than 1,000 teachers and 30,000 students. These studies found that teachers with high levels of affective-interpersonal skills are more effective in teaching learners a variety of cognitive skills, including those addressed by traditional achievement measures. According to Aspy and Roebuck (1972), the levels of the teachers' interpersonal functioning are related directly to pupil achievement, attendance, self-concept, attitudes towards school, and behavior in school.

Motivation and Achievement

Uguroglu (1979) synthesized research on motivation and achievement, and found that only 11.4% of the variance in achievement is accounted for by motivation (based on data obtained from 232 uncorrected observed correlations, with a mean correlation coefficient of.338).

Bloom (1976) analyzed correlations obtained from 40 studies involving 36,946 students. Analysis of variance (ANOVA) and regression analysis were used to analyze the data. A review of the results of the study indicates that motivation measures are relatively weak correlates of learning.

Teacher's Expectations and Behavior Related to Affective Outcomes

Rosenthal and Jacobson's (1968) study indicating the power of the teacher's expectations to bring about a self-fulfilling prophesy, and the findings obtained by Schmuck and Schmuck (1974) confirms the expert's opinion in this survey that the application of expectations in the affective area could also be brought about in students.

Results from other research and investigations indicate that the nature of feedback by "significant" adults, especially the teacher, to students regarding their performance in the educational setting has been shown as having a significant influence on the self-evaluations of students and their affective dispositions towards school learning (Block, 1971).

Student Attitudes and Academic Achievement

According to Kahn (1973), research shows a definite relationship exists between student attitudes and academic achievement. Research findings indicate the following:

1. Academic successes help to promote satisfaction with school.
2. If certain attitudes are held and reinforced consistently in the same direction they lead to a particular self-concept on the part of the pupil which influences his/her expectation of future achievement.
3. Attitudes can be modified, therefore positive findings will provide the basis for devising treatments in order to bring about change in academic achievement.
4. Malpass (1953) correlated pupil's school perceptions with their achievement--children's perception of school was significantly related to teachers' grades but unrelated to standardized achievement results.

5. Brody (1964) classified 505 high school students into "satisfied" and "dissatisfied" with school--"satisfied" group performed better on educational tasks, especially on tests of academic skills.
6. Holtzman and Brown (1968) reported correlations from 0.32 to 0.66 between scores on survey of study habits, attitudes and several achievement measures (large sample of 7-12 students).
7. Kahn (1969) found coefficients of .69 for boys and .79 for girls when six subtests of the Metropolitan Achievement Test Series were correlated with 8 school-related attitudinal factors (428 male and 456 female ninth graders).

Other research results in the affective domain that were reported by Kahn (1973) include the following:

1. Attitudes and academic achievement may not be linearly related.
2. Aptitude measures account for more than half of the reliable variance in school achievement.
3. Affective measures have more in common with achievement than aptitude.
4. When affective variables (e.g., self-esteem, positive attitudes towards school) are combined with scholastic aptitude, they significantly added to the prediction of performance in grade 9, but not grade 12.

Teacher Influences

- Yee (1966, 1968) suggested that since lower-class pupils often have fewer potent sources of adult warmth and support at home, they are influenced to a greater extent by their teachers than are students of middle-class background.

- Yee's research also indicated that teachers in lower class schools had less positive attitudes towards students and tended to make pupil's attitudes toward teachers become less favorable.

Sex Factors Related to Student Attitudes

- Kahn (1973) indicated that some studies show that girl high school students hold more favorable attitudes toward teachers than did male students.

Age Factors Related to Student Attitudes

- Studies conducted by Demos (1960) and Dunn (1968) indicate that school-related attitudes tend to become less favorable with increasing age or school experience.

Personality Factors Related to Student Attitudes

- Flanders, Morrison and Brode (1968) study showed that pupils who felt external conditions and factors determined their degree of school success had more negative attitudes toward teachers and school.

Teacher Attitudes and Affective Outcomes

- Teachers with favorable attitudes (as measured by the MTAI) were better liked by pupils who held strong affective values concerning teachers.
- At the junior high school level (Nelson, 1964) found that teachers are cognitively oriented toward students while the students are affectively oriented toward the teachers.
- Teachers are an important influence on students' attitudes.

- Teachers' attitudes toward their students are reflected in teachers' classroom behavior as perceived by students or observed by experts.
- Reed (1953) found a significant relationship between teachers' effectiveness and teachers' level of self-acceptance.
- Teachers' handling of behavior problems has been reported to have signifcant effects on students' behavior.
- The teacher sets the tone of the classroom social climate through his/her philosophy about classroom, conduct, educational beliefs and values, strategies of instruction, and methods of administering reward and punishment (Tuell and Shaw, 1966).

Teacher Interpersonal Functioning

According to Aspy (1982), large studies involving 6,000 students at both the elementary and secondary levels, revealed that the teacher's levels of interpersonal functioning are positively related to student's attendance and achievement test performance. According to Aspy and Roebuck (1977); Aspy and Roebuck (1979); and Roebuck (1980) studies involving groups of up to 300 or more teachers, and thousands of students, across all studies the findings supported the following conclusions:

1. The levels of teachers' interpersonal functioning are related directly to pupil achievement, attendance, self-concept, attitudes toward school, and behavior in school.
2. The levels of interpersonal functioning are independent of demographic variables.
3. Through interpersonal skills training, teachers can learn to enhance their levels of interpersonal functioning.

In A Place Called School by Goodlad (1984), results of research are presented which conclusively show that, typically:

1. The vehicle for teaching/learning is the whole group.
2. The teacher is pivotal strategic figure in the group.
3. The norms governing the group derive primarily from what is required to maintain teachers' pivotal role.
4. The emotional tone of the classroom is neither harsh and punitive nor warm and joyful; it is described as being flat.

Goodlad (1984) conducted student/teacher observations in over 1,000 classrooms in grades K-12. Some comments by Goodlad, resulting from the observations that he and his research staff conducted, are as follows:

"One wonders if the way classrooms are organized and run has something to do with a neutral emotional tone we observed in many of them."

"Whether we looked at how teachers related to students or how students related to teachers, the overwhelming impression was one of affective neutrality--a relationship neither abrasive nor joyous."

"Students at all levels generally perceived their teachers as being more positive than negative in their concern for them . . ."

"Learning appears to be enhanced when students understand what is expected of them, get recognition for their work, learn quickly about their errors, and receive guidance in improving their performance, however our data showed a paucity (of these occurring in the classroom)."

"Teachers' praise of students' work dropped from about two percent of the observed time in the early elementary classes to about one percent in senior high classes."

"We found little teacher positive reinforcement of students' performance, (and) we found few negative responses on the part of teachers."

". . . the pattern dominating in our data supports the conclusion that the classes in our sample, at all levels, tended not to be marked with exuberance, joy, laughter, abrasiveness, praise, and corrective support of individual student performance, punitive teacher behavior or high interpersonal tension."

"All those characteristics we commonly regard as positive elements in classrooms were more to be observed at the early elementary level. A decline set in by the upper elementary grades and continued through the secondary years, with a sharp drop at the junior high school level."

"Students' academic self-concept scores decreased at a steadily declining rate from early elementary grades up through high school."

The Effect of Praise in the Classroom

In the research that was conducted by Parsons et al. (1982), 428 students in 17 math classes, grades 5, 6, 7 and 9 were administered questionnaires and observed by trained observers using frequency counts and percentages. The data was analyzed using ANOVA, correlations, and regression analysis, and it was found that:

1. A praise has significance only in terms of the context in which it is used (the context determines the meaning of the praise or criticism).
2. A well-chosen criticism can convey as much positive information as a praise.
3. Abundant or indiscriminate praise can be meaningless.

4. Insincere praise which does not covary with the teacher's expectations for the student can have a detrimental effect on many students.
5. Praise was positively related to self-concept of ability (in this case for boys only) if it conveys information about the teacher's expectations. Among girls, the teacher's use of praise did not covary with the teacher's expectations, and praise was related neither to the student's self-concept of ability nor to perceptions of the teacher's expectations.
6. If the amount of praise is considered by the students to be a good indicator of the teacher's expectations, then the amount of praise that one gets is related to one's self-concept of ability. When it is not a good indicator of teacher expectations, it has no direct relation to one's self-concept.

Effective Teaching Strategies Include the Affective Domain

According to Silvernail (1985) "....Researchers have repeatedly found a direct relationship between achievement and self-concept. Moreover, the most recent research in this area has resulted in additional evidence supporting the claim that improvements in achievement will lead to more positive self-concepts." According to Silvernail (1985), the following teaching strategies have been found to be effective for increasing academic achievement:

*(1) Appropriate use of praise.
(2) Use of pupil ideas.
(3) Frequent questioning.
(4) Review exercises.

(5) Clear presentations and questions.

*(6) Teacher enthusiasm.

(7) Increased time on task.

(8) Direct instruction.

*It should be noted that numbers one and six above both fall into the affective domain.

Mathematics Education and the Affective Domain

In her review of research dealing with affective variables and mathematics education, Reyes (1984) defined "affective" as "students' feelings about mathematics, aspects of the classroom, or about themselves as learners of mathematics". Her review of the research on affective variables and mathematics education, revealed the following:

1. Self-concept has a consistent positive relationship with general academic achievement.
2. A significant positive relationship exists between self-concept and mathematics achievement.

Reyes (1984) had the following to say after reviewing the research on affective variables and mathematics education:

> In summary, examining the relationship between self-concept and achievement, one finds a consistent, positive correlation association, with some support for causal effect of self-concept on achievement. Some support is also found for achievement as a causal factor in the development of self-concept.

In continuing to review the research dealing with the affective domain and math achievement, Reyes (1984) found that there is no significant difference between males and females in general self-concept (this refers to a major study conducted by Maccoby and Jacklyn, 1974). These

investigators reported that when male and females were asked to rate themselves on a series of characteristics they generally had equally positive (or negative) views of themselves.

"Confidence in learning," according to Reyes, is one of the most important affective variables in academic achievement. This area was first studied in the National Longitudinal Study of Mathematical Abilities (NLSMA) by Crosswhite (1972). Crosswhite reported correlations of .19 to .37 between confidence and mathematical achievement. Slightly larger positive correlations have been reported since then. Fennema and Sherman (1977, 1978) studied the relationship between confidence and math achievement for students in grades 6-12. They found a .40 correlation. Armstrong (1980) found correlations ranging from .19 to .36 for nationwide samples of thirteen-year-olds, and from .42 to .48 for twelfth graders. Dowling (1978) used an instrument different from the NLSMA Likert rating scale. Dowling, working with college females, developed the Mathematics Confidence Scale (has 18 types of math tasks--one score showing how confident they are about performing each task, and another score for actual performance on each task). Dowling obtained a correlation of .54 between <u>total</u> confidence and <u>total</u> mathematics achievement. Thus, according to Reyes (1984), relatively strong correlations have been found between confidence in learning math (an affective variable) and math achievement. However, according to Reyes "none of the research indicates a causal effect of confidence on math achievement."

Lower-Elementary Students' Self-Perceptions of Ability and Perceptions of Peers' Ability

In a study conducted by Stipek (1981), the accuracy of K-3 students' perceptions of their own relative ability were examined. Included in the study were twelve classrooms of K-3 students and teachers (three classes at each grade level), racially mixed, self-contained, and randomly assigned, including 64 students (32 in K-1 and 32 in grades 2 and 3. Open-ended interviews were used with the students, and teacher ratings were matched with students' self-ratings of smartness and peer ratings of others. Analysis of variance was used to analyze the comparisons. Results of this study indicated the following:

1. Students at the extreme end of the performance continuum have begun to incorporate performance feedback into their self-perceptions as early as second grade.
2. Students begin to critically assess their peers' performance at an earlier age than they do their own performance.
3. Kindergarten and first grade students have a self-enhancement bias (they think higher of their own ability than do their teachers or peers), and a greater bias toward positive perceptions of their own ability than older students do.
4. Kindergarten and first grade children's ratings of their own ability were not related to either the teacher's rating of their achievement status or to ratings they received from their peers.
5. Results suggest that as early as second grade, children at both ends of the performance continuum have begun to incorporate performance feedback into their self-perceptions.

6. Responses of younger children (K-1) indicated they were as concerned about the process of doing academic tasks (e.g., following directions, completing assigned tasks) as they were about the outcomes.
7. Students in both groups (K-1, and second and third grades) frequently correlated good work habits with ability, rather than using outcomes as an indicator of ability. Such behaviors as effort, completing tasks, and following directions, were perceived to reflect the level of their ability. According to Nicholls (1978) effort and ability are not clearly differentiated from each other until after eleven years of age.
8. The findings of this study suggest that children in the early elementary grades may misinterpret information about poor work habits as a negative reflection of their ability.

Factors Affecting Students' Self-Perceptions and Self-Concepts

In Silvernail's (1985) review of research on student self-concept the following findings were obtained:

1. Numerous researchers have examined the relationship between academic achievement and self-concept. With a few exceptions, the findings have indicated a significant and positive relationship between the two variables. High self-concept is concomitant with high achievement, low self-concept with low achievement.
2. Self-concept of achievers is not due to an intelligence factor.
3. A study of 1,000 seventh graders found that the "positive relationship between achievement and self-concept remains intact even after IQ scores are factored out of the data analysis."

4. Students' perceptions of their teachers' feelings toward them are highly correlated with their self-perceptions.
5. Students who feel they are liked and respected by their teachers have higher self-concepts, while those who believe they are disliked by their teachers are more dissatisfied with themselves.
6. Some evidence suggests that student self-perceptions may be a reflection of teachers' self-perceptions. For instance, researchers report that changes in student self-esteem correspond to changes in teacher self esteem.

Other findings that were presented by Silvernail (1985) in his review of the self-concept literature include the following:

1. Teacher expectations are related to student self-concept, however the evidence indicating this is far from conclusive.
2. The effects of non-promotion on student self-concept remains unclear.
3. Additional time will need to pass before we can determine the impact of mainstreaming on student self-concept.
4. In general, student self-concept becomes more negative through the schooling years.
5. Teacher's self-image, their interactions with students, and their teaching styles, all relate to student self-concept.

The Effects of Student Confidence on Achievement

In a study conducted by Fennema and Sherman (1977, 1978) dealing with the effect of confidence on achievement, results of the study indicated that (1) gender related differences were in favor of males in terms of mathematics achievement at the high school and middle school levels, and (2) gender confidence level was greater for males, even when the difference in achievement, favored females.

Relationship Between Student Achievement and Preference for Instructional Methods

A study conducted by Clark (1982), dealing with the antagonism between achievement and enjoyment, in aptitude treatment intervention studies, indicated negative correlations existed between student achievement and student enjoyment of instructional methods in certain instructional settings--students often reported enjoying the method from which they learned the least.

The findings reported in this study were as follows:

1. Students make inaccurate judgments about the amount of effort they will need to expend to achieve maximum learning outcomes.
2. Low ability kids typically prefer more permissive instructional methods (apparently so they can maintain a low profile so that their failures are not as visible).
3. In order to experience maximum achievement, low ability students require less permissive methods which will lower the information processing load on them.
4. High ability students prefer more structured methods which they believe will make their efforts more efficient.
5. Actually, high ability students seem to learn more from more permissive approaches which allow them to bring their own considerable skills to bear on learning tasks.

Appendix C

TESA: An Affective Teacher Inservice Program Based on Research

One of the most significant projects addressing the relationship between the affective domain and student academic success is called TESA (Teacher Expectations and Student Achievement). TESA was initiated in the Los Angeles County School District in 1971. It was originally called EOC (Equal Opportunity in the Classroom). The EOC program was based upon the results obtained from a three-year study to determine the effect on student achievement if teachers practiced specific motivating and supportive behaviors with students who were perceived to be low achievers. The teachers were trained to distribute 15 interactions in an equitable manner among high and low achieving students. In a control group, no effort was made to equitably interact with all the students. It was hypothesized that low achievers in the experimental group would make statistically significant gains over the control group low achievers. The results obtained were as follows:

1. Both groups of achievers had statistically significant gains over comperable achievers in the control group; and
2. There was a significant reduction in absenteeism and discipline referrals.

The main function of the TESA program is to have teachers become aware of the importance of their personal behavior with students during the teaching-learning interaction, and how it affects both academic achievement and self-concept, especially for low achievers. TESA researchers found that most teachers give students, viewed as high achievers, more opportunity to recite and answer questions than low achievers. The TESA training workshops focus on role-playing in which teachers are taught how to ask for responses in the classroom in a more equitable manner. Teachers practice by observing each other in their classrooms on the 15 interactions, (after the workshop sessions) and provide feedback to each other on how they demonstrated the interactions (peer evaluation is used to prevent the threat of any external judgments by superiors). The objective of the TESA program is to produce teacher behaviors that result in (1) significant student achievement gains, and (2) improved student attitudes towards school and self.

The strengths of the TESA training program are as follows:

1. Teachers learn from each other;
2. Teachers work in small groups;
3. Teachers focus on job related tasks; and
4. Teachers practice what they are taught, in real job setting.

The following figure depicts the TESA interaction model:

Figure 2. TESA Interaction Model.

Units	Strand A: Response of Opportunities	Strand B: Feedback	Strand C: Personal Regard
1	Equitable distribution of response opportunities	Affirm or correct student's performance	Proximity
2	Individual helping	Praise of learning performance	Courtesy
3	Latency	Reasons for praise	Personal interest/Compliments
4	Delving	Listening	Touching
5	Higher-level questioning	Accepting feelings	Desisting

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